REMARKS

Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

The specification has been amended to include section headings. No new matter is believed to be introduced by the amendments.

Claims 1-21 have been canceled in favor of new claims 22-40. Support for the subject matter of the new claims is provided in original claims 1-21. New claims 22-40 have been drafted to avoid the issue underlying the objections to claims 5-14.

Claims 1, 4, 15-17, and 19 were rejected, under 35 USC §102(e), as being anticipated by Onggosanusi et al. (US 2003/0048857). Claims 1, 4, 15-17, 19, and 20 were rejected, under 35 USC §102(e), as being anticipated by Riazi et al. (US 6,580,705). Claims 1-3, 15, and 17-21 were rejected, under 35 USC §102(e), as being anticipated by Lundby et al. (US 6,356,528). To the extent these rejections may be deemed applicable to new claims 22-40, the Applicants respectfully traverse.

The applied references fail to anticipate the features recited in new claim 22 of modulating data using different first and second modulation schemes to produce first and second symbols, wherein the first and second modulation schemes are

selected such that, after demodulating the first and second symbols and diversity combining the demodulated data bits, the differences among the diversity-combined bit reliabilities are reduced.

By contrast to the above-noted claimed feature, Onggosanusi discloses modulating two bits of a six-bit sequence with a first modulation scheme and modulating the remaining four bits with a second modulation scheme (see Onggosanusi paragraph [0110]). Onggosanusi does not disclose modulating the same data bits using two different modulation schemes so as to produce first and second modulation symbols, as recited in claim 22. Moreover, Onggosanusi does not disclose combining the data bits of the demodulated first and second symbols to improve the reliability of the received information, as recited in claim 22. As a result, it necessarily follows that Onggosanusi cannot disclose the claimed feature of selecting the two modulation schemes such that the differences among the reliabilities of the combined bits are reduced.

Similarly, Lundby also does not anticipate the features of claim 22 of: (1) modulating the same data bits using two different modulation schemes to produce first and second modulation symbols, (2) diversity combining the data bits of the demodulated first and second symbols, and (3) selecting the

first and second modulation schemes such that, after the combining, the differences among the combined bit reliabilities are reduced.

Instead, Lundby discloses reordering the sequence of symbols transmitted on different channels so as to reduce the likelihood that two successive symbols of the original sequence are lost in transmission due to fading (see Lundby col. 4, lines 17-26). For example, if two successive symbols of an original sequence are separated during transmission by interleaving ten other symbols between them, then a fade affecting any two or three successive interleaved symbols will not cause the loss of any two successive symbols of the original (i.e., non-interleaved) sequence.

The Office Action proposes that Riazi discloses modulating data using first and second modulation schemes to produce first and second symbols and diversity combining the information of the demodulated first and second symbols (see Office Action section 7). However, Riazi does not disclose the feature recited in claim 22 of selecting the first and second modulation schemes such that the differences among the reliabilities of the diversity-combined bits of the symbols are reduced.

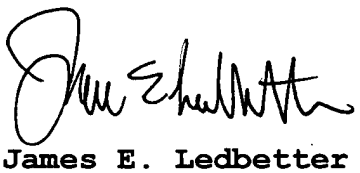
Accordingly, the Applicants submit that none of the applied references anticipates the subject matter defined by new claim 22. Independent claims 34 and 38 similarly recite the above-

mentioned features distinguishing method claim 22 from the applied references, but with respect to apparatuses. Therefore, allowance of claims 22, 34, and 38 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,



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